CLAIMS

What is claimed:

1. An electronic assembly, comprising:

a carrier substrate having an upper plane;

a die having a die substrate and an integrated circuit formed on one side of the die substrate, the die having a lower major surface over the upper plane, an upper major surface, and a plurality of side edge surfaces from the upper major surface to the lower major surface, a corner edge portion where extensions of two of the side edge surfaces meet, having been removed; and

a solidified underfill material between and contacting both the upper plane of the carrier substrate and the lower surface of the die.

2. The electronic assembly of claim 1, wherein the corner edge portion has an area of between 537 μm^2 and 860000 μm^2.

3. The electronic assembly of claim 1, wherein the die is rounded at the corner edge portion.

4. The electronic assembly of claim 3, wherein the die has a radius of between 50 μm and 1000 μm at the corner edge portion.

5. The electronic assembly of claim 3, wherein an entire thickness of the die from

the upper to the lower major surface is rounded.

6. The electronic assembly of claim 1, wherein the underfill material has a different CTE than the substrate.

7. The electronic assembly of claim 1, further comprising:

a plurality of conductive interconnection members between and electrically connecting the carrier substrate to the die, the underfill material being disposed between the conductive interconnection members.

8. An electronic component, comprising:

a die having a die substrate and an integrated circuit formed on the die substrate, the die having upper and lower major surfaces and a plurality of side edge surfaces from the upper to the lower major surface, a corner edge portion where extensions of two of the side edge surfaces meet, having been removed.

9. The electronic component of claim 8, wherein the corner edge portion has an area of between 537 μm^2 and 860000 μm^2.

10. The electronic component of claim 8, wherein the die is rounded at the corner edge portion.

11. The electronic component of claim 10, wherein the die has a radius of between 50 μm and 1000 μm at the corner edge portion.

12. The electronic component of claim 10, wherein an entire thickness of the die from the upper to the lower major surface is rounded.

13. The electronic component of claim 8, further comprising:

a plurality of conductive interconnection members on a side of the die of the integrated circuit.

14. The electronic component of claim 13, wherein the conductive interconnection members are solder balls.

15. A method of making microelectronic dies, comprising:

singulating a wafer substrate on which a plurality of integrated circuits are formed into a plurality of dies, each die including a respective one of the integrated circuits, and each die having opposing major surfaces and a plurality of side edge surfaces connecting the major surfaces; and

removing a corner edge portion of each die where two side edge surfaces of the respective die meet.

16. The method of claim 15, wherein the portions are removed after the dies are

singulated.

17. The method of claim 15, wherein the portions are removed with an Excimer laser beam.

18. A method of constructing an electronic assembly, comprising:

mounting a die having a die substrate and an integrated circuit formed on the die substrate over a carrier substrate with an underfill material between and contacting both one major surface of the die and a plane of the carrier substrate;

heating the underfill material to cure the underfill material; and

allowing the underfill material to cool, the die having side edge surfaces from the one major surface to an opposing major surface thereof, a corner portion where two of the side edge surfaces meet, having been removed to reduce stresses that may crack the die due to differential coefficients of thermal expansion of the die and the underfill material.

19. The method of claim 18, further comprising:

singulating a wafer substrate on which a plurality of integrated circuits are formed into a plurality of dies, each including a respective one of the integrated circuits, and each die having opposing major surfaces and a plurality of side edge surfaces connecting the major surfaces; and

removing a corner edge portion of each die where two side edge surfaces of

the respective die meet, one of the dies being the die that is mounted.

20. The method of claim 19, wherein the portions are removed with an Excimer laser beam.